

Related Job Titles:

Systems analyst, computer engineer, software engineer, software developer, database administrator, computer support specialist, network engineer, hardware engineer, network administrator, systems administrator, database specialist, communications specialist

Job Description:

Computer scientists design and develop new computer **hardware** and **software**. They research, form new computer rules and invent new products such as robots that use virtual reality, new computer languages, programming tools or even computer games. They normally work in offices or laboratories and spend most of their time on the computer.

Interests / Abilities:

- Do you enjoy working with math and technology?
- Are you good at math?
- Are you good at reasoning and logic?
- Do you like to solve problems?
- Do you work well with a team?
- Do you pay close attention to details?
- Do you express yourself well when speaking to others?

Education / Training Needed:

The minimum education required for this position is a **bachelor's degree** in computer science, computer **engineering**, **electrical engineering**, information science, computer information systems, data processing or a similar subject from an accredited **college** or **university**. This study must include 30 semester hours of differential and integral **calculus**, statistical techniques and computer science theory and practical applications. To do research, a **Ph.D.** is highly desired for this position.

Suggested School Subjects / Courses:

- Math
- Science (**physics**)
- Computer programming

Areas of expertise:

- **Computer engineering:** use math and science to design **hardware**, **software**, **networks** and processes to solve technical problems such as analyzing flight systems and aerospace data
- **Applications programming:** design and develop **software** that control and automate processes such as flight **software**
- **Communications:** install, test and solve problems for **hardware** and **software** on a **network**
- **Systems analysis:** use computer technology to solve specific business, scientific or **engineering** problems
- **Database administration:** design, change, test and manage the security of computer **databases**
- **Computer support:** assist and advise computer users with **hardware**, **software** and system problems

Additional Resources:

- **NASA Jobs**
<http://nasajobs.nasa.gov>
- **Association for Computing (ACM)**
<http://www.acm.org>
- **IEEE Computer Society**
<http://www.computer.org>
- **Institute for Certification of Computing Professionals (ICCP)**
<http://www.iccp.org>
- **Robotics Education**
<http://robotics.arc.nasa.gov>
- **ThinkQuest** - encourages the use of computers and network technology in education.
<http://www.thinkquest.org>

What can I do right now?

- Read magazines like *MacWorld*, *Byte*, *PC World*.
- Join a computer club.
- Take as many math and computer classes as you can.
- Visit Astro-Venture regularly to participate in chats and activities.
- Call the American Association of Science and Technology Centers for information on science museums in your area that you might visit. (202) 783-7200
- Participate in science fair projects.

